



# Southern California Reliability



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# Long Term Procurement Plan (LTPP)

- The LTPP authorizes new infrastructure to maintain system reliability
- Looks forward 10 years to identify system and local needs
- Considers alternative futures (renewable portfolio, demand and supply, and transmission scenarios)
- Updates procurement rules





## 2012 LTPP

- **Track 1 - D.13-02-015** authorized SCE to procure electrical capacity in the West LA Basin & Moorpark sub-areas to meet long-term local capacity requirements.
- **Track 4 - D.14-03-004** authorized additional procurement for SCE and SDG&E to meet local capacity needs stemming from the retired San Onofre Nuclear Generation Stations (SONGS).





# Any Authorization Requires Balance of Operational Benefits

Any resource authorization must balance capabilities

No single resource can meet both reliability needs and state policy objectives alone

Type	Annual Capacity Factor	Expected Availability On-Peak	Dispatchable	Inertia	Reactive power support (VARs)	GHG-free
Energy Efficiency[1]	Reduces total energy demand					Yes
Demand Response	Low [2]	100%	Yes	No	No	Yes
Combined Heat & Power	80%	100%	Maybe	Yes	Yes	No
Large Solar	24%	77%	No	No	No	Yes
Rooftop Solar	19%	45%	No	No	No	Yes
Wind	33%	30%	No	No	No [3]	Yes
Storage	N/A	100%	Yes	No	Maybe	Yes
Gas Peaker/CT	10%	100%	Yes	Yes	Yes	No
Gas Combined Cycle	65%	100%	Yes	Yes	Yes	No

[1] Energy efficiency is not traditionally measured as a capacity factor resource, and savings varies widely by application and use.

[2] Demand response programs generally have low capacity factors due to typical usage limits of 100 hours or less per year.

[3] Some renewable energy sources, notably wind, actually require additional VAR support.





## Impact of Future Assumptions

Potential reductions to 2390 MW* need	Impact on Need (MW)	Remaining Need (MW)
Temporary Load-shedding	-588	
Mesa Loop-in Transmission Project	-734	
Uncommitted Energy Efficiency	-733	
Energy Storage	-745	
Second Contingency Solar PV	-800	
Second Contingency DR	-997	
<b>Total</b>	<b>-4597</b>	
Assuming 20% of that Total Materializes	-920	1470
Assuming 30% of that Total Materializes	-1380	1010
*Based in the ISO' s analysis to ensure reliability		

- **Conservative assumptions of future resources reduce need as follows:**
  - **20% of 4597 MW need = 920 MW reduction → 1470 MW need**
  - **30% of 4597 MW need = 1380 reduction → 1010 MW need**
  - **Procurement authorized in D.14-03-004 matches this range of needs**
- **Since that Decision was issued, Mesa Loop-in and 2<sup>nd</sup> contingency DR have materialized as real options, reducing need below low range of 1010 MW**





# SCE Authorization for LA Basin

Resource Type	Track 1 LCR Resources (D.13-02-015)	Additional Track 4 Authorization (D.14-03-004)	Total Authorization
<b>Preferred Resources</b>	150 MW	400 MW	550 MW
<b>Minimum Requirement</b>			
<b>Energy Storage</b>	50 MW	--	50 MW
<b>Minimum Requirement</b>			
<b>Gas-fired Generation</b>	1000 MW	--	1000 MW
<b>Minimum Requirement</b>			
<b>Optional Additional From Preferred Resources/Energy Storage Only</b>	Up to 400 MW		Up to 400 MW
<b>Additional from any Resource</b>	200 MW	100 to 300 MW	300 to 500 MW
<b>Total Procurement Authorization</b>	1400 to 1800 MW	500 to 700 MW	1900 to 2500 MW





# SDG&E Authorization

Resource Type	D.13-03-029/ D.14-02-016	Additional Track 4 Authorization (D.14-13-004)	Total Authorization
Preferred Resources (including energy storage)	---	175 MW	175 MW
Minimum Requirement			
Energy Storage	---	25 MW	25 MW
Minimum Requirement			
Additional from any resource	300 (Pio Pico)	300 to 600 MW	600 to 900 MW
Total Procurement Authorization	300 MW	500 to 800 MW	800 to 1100 MW





# SCE Implementation Progress

- **SCE**
  - SCE's Local Capacity Requirements (LCR) procurement plan approved Aug 2013.
  - SCE issued its Request for Offers (RFO) Sept 2013.
  - SCE did not revise its LCR procurement plan after the issuance of D. 14-03-004, but expects to fill some or all of this additional authorization through the existing RFO and through subsequent RFOs to the extent that authorizations are not met.
  - Application for some or all PPAs Nov 2014.
  - Commission could issue a decision between May and Aug 2015.
  - Resources on-line beginning 2018 through 2021.
  - D.14-06-048 authorized up to two Solar PV Program solicitations for a total of 125 MW with preference for SONGS-affected area.







# SDG&E Implementation Progress

- **SDGE**
  - Procurement plan approved by Energy Division on July 22, 2014.
  - RFO may be issued as early as Aug 2014
  - A.14-07-009: Application for approval of agreement with Carlsbad Energy Center for 600 MW.
    - SDG&E requests Commission decision by Dec 2014
    - If approved, online by Nov 2017
    - Retirement of Encina by Dec 2017
  - Petition filed with the Court of Appeal seeks to overturn decision authorizing Pio Pico.

